

INK-JET PRINTING METHODS AND SYSTEMS PROVIDING IMPROVED IMAGE DURABILITY

ABSTRACT OF THE DISCLOSURE

5

Systems and methods for providing smudge resistant and durable ink-jet images are provided. Specifically, a system for printing durable ink-jet ink images can comprise a first printhead containing a fixer composition including a charged fixer component, wherein the first printhead is configured for ink-jet printing the fixer composition on a substrate. The system can further comprise a second printhead containing an ink-jet ink, wherein the second printhead is configured for ink-jet printing the ink-jet ink composition over the fixer composition. The ink-jet ink can also include a colorant carrying an opposite charge with respect to the charged fixer component. A third printhead containing a polymer overcoat composition can also be present, and can be configured for ink-jet printing the polymer overcoat composition over ink-jet ink composition. The polymer of the polymer overcoat composition can also carry an opposite charge with respect to the charged fixer component.